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UTAH REGULATIONS FOR NONFERROUS MINING OPERATIONS

I. Air Standards

Fugitive dust emissions from non-process sources (e.g. waste piles or vehicles) are the only secondary materials addressed in this section because they are the air pollutants for which current regulations may be deficient according to EPA's June 22, 1987, Draft Management Plan for Mining Waste.[1]

The Utah Bureau of Air Quality administers all facets of the federal Clean Air Act, including regulation of particulate matter. EPA's recent revision of the national ambient air quality standard (NAAQS) for particulate matter may affect mining operations.[2] The revisions changed the indicator pollutant for particulate matter (PM) from "total suspended particulates" (PM with a nominal diameter up to 45 micrometers) to a new "PM-10" indicator pollutant (nominal diameter up to 10 micrometers). In addition, new ambient air quality values were promulgated. This change applies to primary NAAQS (designed to protect human health)

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1 U.S. Environmental Protection Agency, Management of Mining Wastes, RCRA Subtitle D Regulatory Program Development, Draft Management Plan, C-7 (June 22, 1987). In a recent case on the air pollutant vinyl chloride, National Resources Defense Council v. U.S. E.P.A., No. 85-1150 (D.C.Cir. July 28, 1987), the D.C. Circuit in an 11-0 en banc decision overturned EPA's practice of using economic considerations and technological feasibility in setting national emissions standards for hazardous air pollutants (NESHAP). The ramifications of this ruling for EPA's arsenic NESHAP (also based on economics and technological feasibility) and mining sites generating arsenic are unclear, but administrative or judicial review is likely. The Natural Resources Defense Council filed a timely petition for review of the arsenic regulations (NRDC v. Thomas, No. 86-1532 (D.C.Cir. Oct. 1, 1986), which was held in abeyance pending disposition of the vinyl chloride case. The current arsenic regulation affects only process emissions from smelters. It is unclear to what extent the hazardous nature, if any, of non-process fugitive emissions from mining will be examined.

2 52 Fed.Reg. 24,634 (July 1, 1987).

and secondary NAAQS (established to prevent adverse welfare effects).

Under the PM-10 regulations (promulgated simultaneously with the NAAQS revisions),[3] Utah will be required to revise by May 1, 1989, its PM State Implementation Plan (SIP) to demonstrate attainment of the new standards. In particular, two Utah counties, Salt Lake and Utah,[4] are believed by EPA to be in non-attainment for PM-10. EPA is requiring a full PM-10 attainment demonstration for these counties. The requirements for other Utah counties are less severe.

Among other things, a full attainment demonstration must include an inventory of sources that emit particles less than 10 microns, compliance schedules to attain the standard, monitoring and reporting requirements and enforcement procedures. To the extent fugitive dust from mining operations is less than 10 microns, a regulatory framework already exists to address the problems identified in the June 22 Management Plan.

II. Surface Water Standards

Point source discharges to surface waters from mining and mineral processing facilities are regulated under the Clean Water Act. These discharges require a permit under the National Pollutant Discharge Elimination System (NPDES) program. On July 7, 1987, EPA granted authority to the Utah Bureau of Water Pollution Control (BWPC) to administer the NPDES program.[5] Among the effluent guidelines incorporated into NPDES permits for mining and mineral processing are discharge limitations for: (1) smelting and refining activities[6] and (2) ore mining and dressing.[7]

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3 Id. at 24,672.

4 52 Fed.Reg. 29,383 (Aug. 7, 1987).

5 52 Fed.Reg. 25,758 (July 22, 1987).

6 40 C.F.R. Part 421.

7 40 C.F.R. Part 440, applicable to extraction and beneficiation activities.

III. Ground Water and Other Mining Standards

It is unlawful in Utah "to place or cause to be placed any wastes in a location where there is probable cause to believe they will cause pollution."[8] "Pollution" means any alteration of the integrity of the waters of the state, including ground water.[9]

A. Active Mines

The two principal state agencies responsible for protecting groundwater from mining operations in Utah are the Bureau of Water Pollution Control (BWPC) of the Department of Environmental Health, and the Division of Oil, Gas and Mining (DOGM) of the Department of Natural Resources. BWPC's role is relatively minor, consisting primarily of reviewing construction permits for tailings and other holding ponds that contain significant quantities of wastewater. Since the early 1980's, BWPC has required most ponds to be lined with a low permeability material such as clay or a synthetic liner, and to conduct groundwater monitoring.[10] BWPC determines the need for these control measures on a site-specific basis.

DOGM implements the Utah Mined Land Reclamation Act (MLRA), Title 40-8. The MLRA was enacted in 1975 and amended in 1987. Revisions to regulations implementing the MLRA are scheduled to be proposed in November, 1987.

1. Current Regulations

Operators must file a "Notice of Intention to Commence Mining" which describes their operations and contains a plan for reclamation. The plan must describe, among other things, possible post-mining land uses, a revegetation program, and the manner in which overburden,

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8 Utah Water Pollution Control Act, Title 26-11-8 (1975).

9 Id. at 26-11-2(10) and (17).

10 Utah Department of Health, Ground Water Quality Protection Strategy for the State of Utah [hereinafter referred to as "Utah Ground Water Protection Strategy"] 78 (June, 1986). The regulatory authority relied on to impose these requirements is the Utah Wastewater Disposal Regulations, Part III. Telephone conversation with Mr. Fred Nelson, Assistant Attorney General for Utah (Aug. 17, 1987).

tailings and waste will be deposited. Numerous standards must be complied with in the course of reclamation, including the following:

(a) Toxic materials--All toxic or potentially toxic materials must be removed from the site or left in an isolated condition such that releases to the environment are reasonably eliminated or controlled.[11] "Toxic" materials are those which can reasonably be expected to negatively affect ecological or hydrological systems or be hazardous to the public.

(b) Impoundments--Tailings ponds and other impoundments must be self-draining and non-impounding unless previously approved as an impounding facility.

(c) Dams--All major water impounding structures must be non-impounding, self-draining, mechanically stable and protected from erosion.

(d) Slopes--If possible, waste piles must be regraded to a rounded configuration and sloped to minimize safety hazards and erosion.

(e) Revegetation--Where possible, vegetation must be established subsequent to final grading.

Financial assurance must be provided to ensure that the operator will have sufficient funds to carry out the reclamation plan. An annual report must be sent to DOGM describing the disposition of material removed from the mine and the status of the reclamation work. If an operator expects to terminate operations for greater than two years, he must submit information to enable DOGM to evaluate the condition of the land. DOGM is then required to inspect the property within 30 days of receiving the information, and may take any action appropriate to further the purposes of the MLRA.

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[11] Underscored words highlight aspects different than the draft proposed regulations discussed later.

2. Draft Proposed Regulations

The proposed regulations apply to the operation (as well as the reclamation) of mining sites and contain provisions more stringent than the current reclamation standards. In addition to the Reclamation Plan, the "Notice of Intent to Commence Mining" must contain an Operations Plan and an Impact Assessment. Among other things, the Operations Plan requires the operator to analyze materials that are potentially toxic, and to identify any acid-forming or toxic materials present or to be left on the site. It also requires that at least 70 percent of the pre-mining vegetation be re-established (Form MR-MO, p. 8). The Impact Assessment must describe projected impacts to surface and ground water systems, species of high interest or their critical habitat, etc.

Detailed operating practices are also set forth, including a requirement to use interim stabilization measures for areas at mining sites not utilized for greater than a year. In addition, "reasonableness" would no longer be a factor when determining measures necessary to eliminate or control adverse effects from toxic materials.

More information must be submitted in the Reclamation Plan than under the current regulations. For example, the operator must provide a description of the treatment, location and disposition of any toxic or acid-forming materials generated and left on-site. The required reclamation practices are also more specific. For example, the variance from the requirement to render tailings ponds non-impounding requires the operator to demonstrate that the pond's design is hydrologically sound and beneficial to the post-mining use.

Some aspects of the proposed regulations are more flexible than the current standards. For example, operators expecting to terminate operations for greater than two years must supply detailed information to DOGM only upon request. For terminations expected to be greater than five years, the requirement to submit information is automatic. After ten years, the site must be completely reclaimed.

Small mining operations are also handled differently under the proposed regulations. The current regulations contain an exemption for mines that disturb less than two acres of land annually. By contrast, the proposed regulations set forth a special set of reduced standards for all mines that disturb less than five acres of land.

A final major change from the current regulations concerns exploration activities. The current regulations basically require that the operator submit a letter of intent to commence exploration, and a plan to reclaim all affected land. The proposed regulations, on the other hand, contain detailed requirements similar to those described above for mining operations. The most significant difference is that the proposed regulations do not require operation or reclamation plans for exploration activities; nor are impact assessments generally required.

B. Abandoned Mines

Under Utah statutes, abandoned mines are those that have not produced minerals since August 3, 1977.[12] The Abandoned Mine Reclamation (AMR) Program, administered by DOGM, inventories abandoned tailings, holding ponds, groundwater contamination, and acid mine drainage in Utah and in conjunction with the federal Superfund program establishes priorities for their cleanup. In addition, the BWPC investigates abandoned tailings and holding ponds which may impact underlying aquifers.[13] Several sites are undergoing cleanup or remedial investigations under BWPC's direction.

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12 Utah Ground Water Protection Strategy, at 80.

13 Id. The AMR Program is authorized under the Utah Coal Mining and Reclamation Act, Title 40-10-25 (1979). Expenditures to cleanup abandoned non-coal mines may be made "only after reclamation with respect to abandoned coal lands or coal development impacts have been met, except for those [non-coal] reclamation projects relating to the protection of the public health or safety." Id. at 40-10-27(10)(b).